










Date: Wednesday, 01/10/2008 4:23:33 PM
 User: Julie Lecocq

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: OH-58 AFT X-TUBE ASSEMBLY
Job Number	: 42378		
Estimate Number	: 13214		
P.O. Number	:	Part Number	: D058676201TRN
This Issue	: 01/10/2008	S.O. No.	:
Prsht Rev.	: NC	Drawing Number	: D058-676-241 <i>UR</i> <i>08.10.02</i>
First Issue	: / /	Project Number	: N/A
Previous Run	: 37979	Drawing Revision	: A2
Written By	:	Material	:
Checked & Approved By	: <i>JUD 08.10.01</i>	Due Date	: 08/10/2008
Comment	Est Rev A 08-03-06 new issue DD verified by: ec Est Rev B 08-04-02 Removed polish EC verified by: DD		
Additional Product:			
Job Number: 			
Seq. #:	Machine Or Operation:	Description :	
1.0	D6007106	Crosstube, OH58	
			
Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) Pick: Qty Part number Description Batch 1 D6007-106 Crosstube <i>B38339</i> Check OD = 2.250"; ID = 1.550" <i>am 08.10.02</i>			
2.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE	
			
Comment: MORI SEIKI CNC LATHE LARGE 1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA086 2-Turn first side as per Folio FA086 3-File down transition lines smooth. <i>am 08.10.02</i>			
3.0	QC1	INSPECT ALL DIM TO DIM SHEET	
			
Comment: INSPECT ALL DIM TO DIM SHEET <i>am 08.10.02</i>			
4.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE	
			
Comment: MORI SEIKI CNC LATHE LARGE 1-Turn second side as per Folio FA086 2-File down transition lines smooth. 3-Remove sand and plugs <i>am 08.10.02</i>			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 01/10/2008 4:23:33 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: OH-58 AFT X-TUBE ASSEMBLY

Job Number: 42378

Part Number: D058676201TRN

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

Am 08-10-02

6.0

QC8

SECOND CHECK



AWM 8-10-03



Comment: SECOND CHECK

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



AWM 8-10-03



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1 within 24 hours of machining

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

D 11-10-03

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and stock in kanban rack

Location: X-TUBE

CELL

AWM

8-10-03

10.0

QC21

FINAL INSPECTION/W/O RELEASE



08/10/03

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-10-03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 42378
Description: Crosstube Assembly (OH-58 High Aft)		Part Number: D058-676-241
Inspection Dwg: D058-676-241 Rev: A2		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Inspection Sheet	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+0.005/-0.000	2.244	/			
	1.870	+0.005/-0.000	1.875	/			
	1.956	+0.005/-0.000	1.961	/			
	2.045	+0.005/-0.000	2.050	/			
	2.093	+0.005/-0.000	2.098	/			
	2.140	+0.005/-0.000	2.145	/			
	2.188	+0.005/-0.000	2.193	/			
	2.228	+0.005/-0.000	2.233	/			
	0.186	+0.005/-0.000	0.186	/			
	0.500	+0.005/-0.000	0.500	/			
	R0.063	+0.005/-0.000	R0.063	/			
	R0.500	+0.005/-0.000	R0.500	/			
SIDE B	103.51	+0.005/-0.000	103.510	/			
	2.240	+0.005/-0.000	2.245	/			
	1.870	+0.005/-0.000	1.875	/			
	1.956	+0.005/-0.000	1.961	/			
	2.045	+0.005/-0.000	2.050	/			
	2.093	+0.005/-0.000	2.098	/			
	2.140	+0.005/-0.000	2.145	/			
	2.188	+0.005/-0.000	2.193	/			
	2.228	+0.005/-0.000	2.233	/			
	0.186	+0.005/-0.000	0.186	/			
	0.500	+0.005/-0.000	0.500	/			
	R0.063	+0.005/-0.000	R0.063	/			
	R0.500	+0.005/-0.000	R0.500	/			

Measured by: a.m	Audited by: AWM	Prototype Approval:	N/A
Date: 08.10.02	Date: 7-10-03	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue (P/O D058-676-201)	KJ/JLM	



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D058-676-241	REV. A SHEET 1 OF 3
DATE 00.11.17		TITLE CROSSTUBE ASS'Y (OH-58 HIGH AFT) NTS	
A	00.11.17	NEW ISSUE	

Qty	Part Number	Description
X	D058-676-241	CROSSTUBE ASSEMBLY (OH-58 HIGH AFT)
1	D6007-106	CROSSTUBE
2	D2856-400-694	ABRASION STRIP
2	D2891-1	SUPPORT
4	MS21920-20	CLAMP

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6007-106
FINISHED LENGTH = 103.51 ± 0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-694 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2891-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX-241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

Rev 01.10.02
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06.10.13 [Signature]
Update New P.O.

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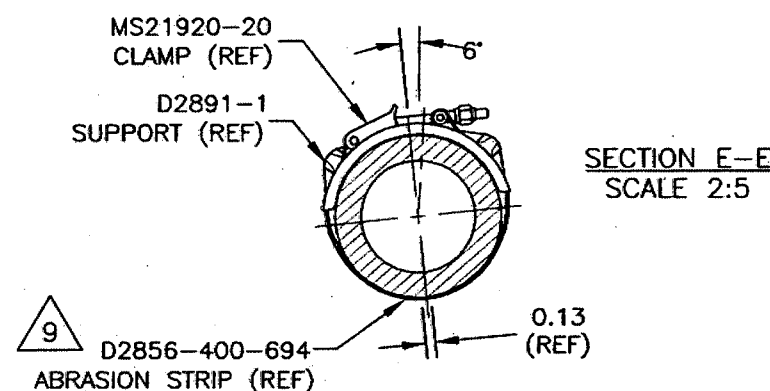
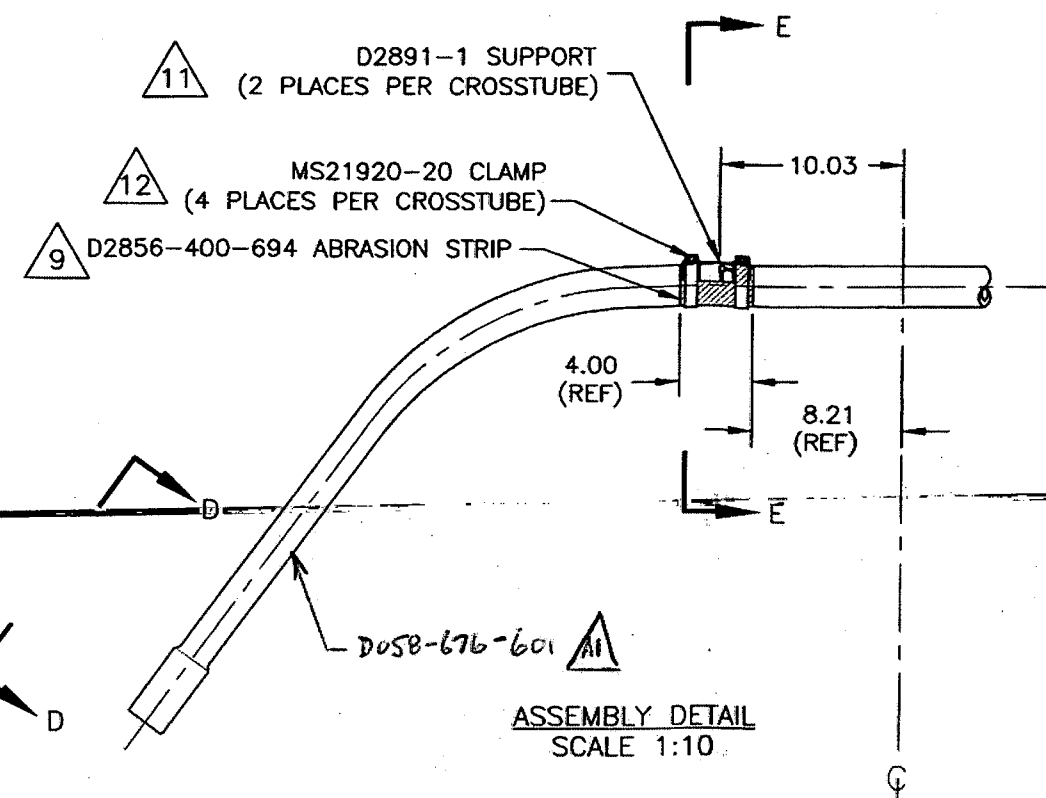
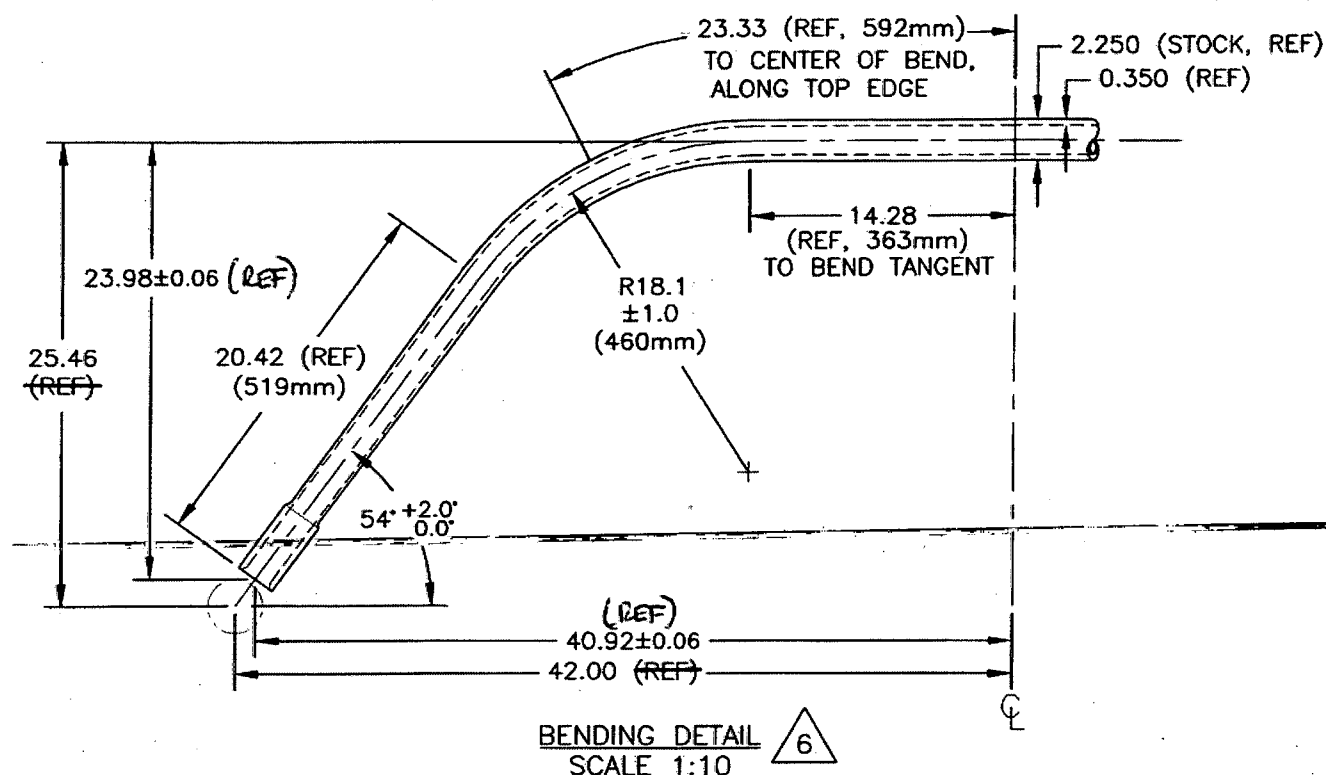
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00.11.24 [Signature]

A2	01.07.16	UPDATE DIM TO FIRST HOLE	<i>[Signature]</i> <i>CP</i>
A1	01.03.07	ADD D058-676-601 P/N	<i>[Signature]</i> <i>CP</i>

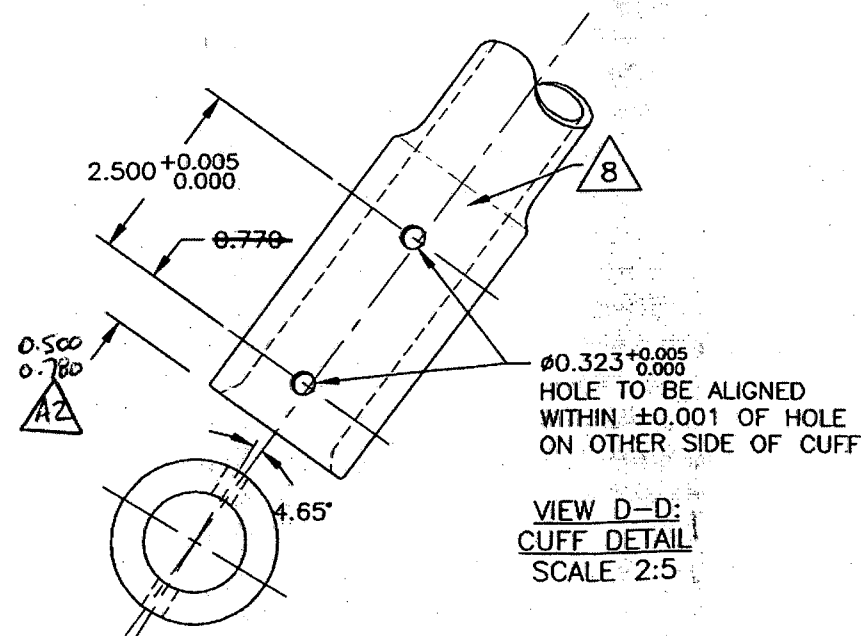
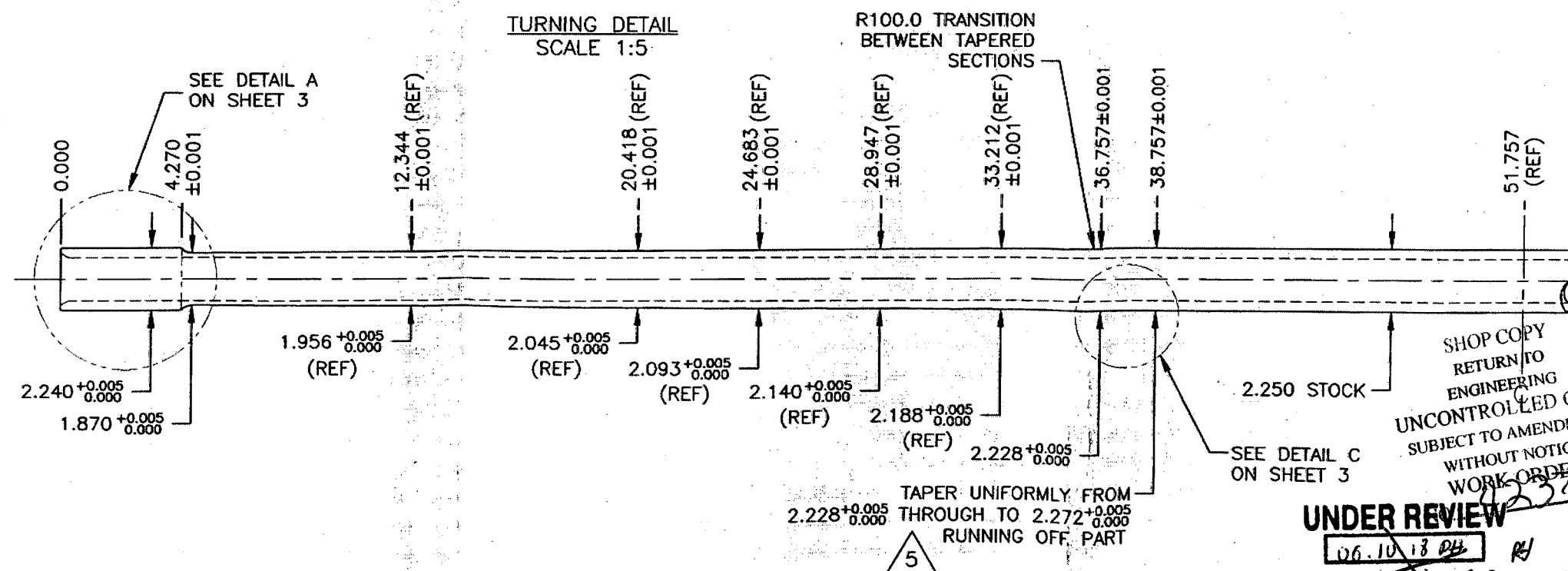
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DART

DART AEROSPACE LTD.
HAMMERSBURY, ONTARIO, CANADA

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APPROVED

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D058-676-241

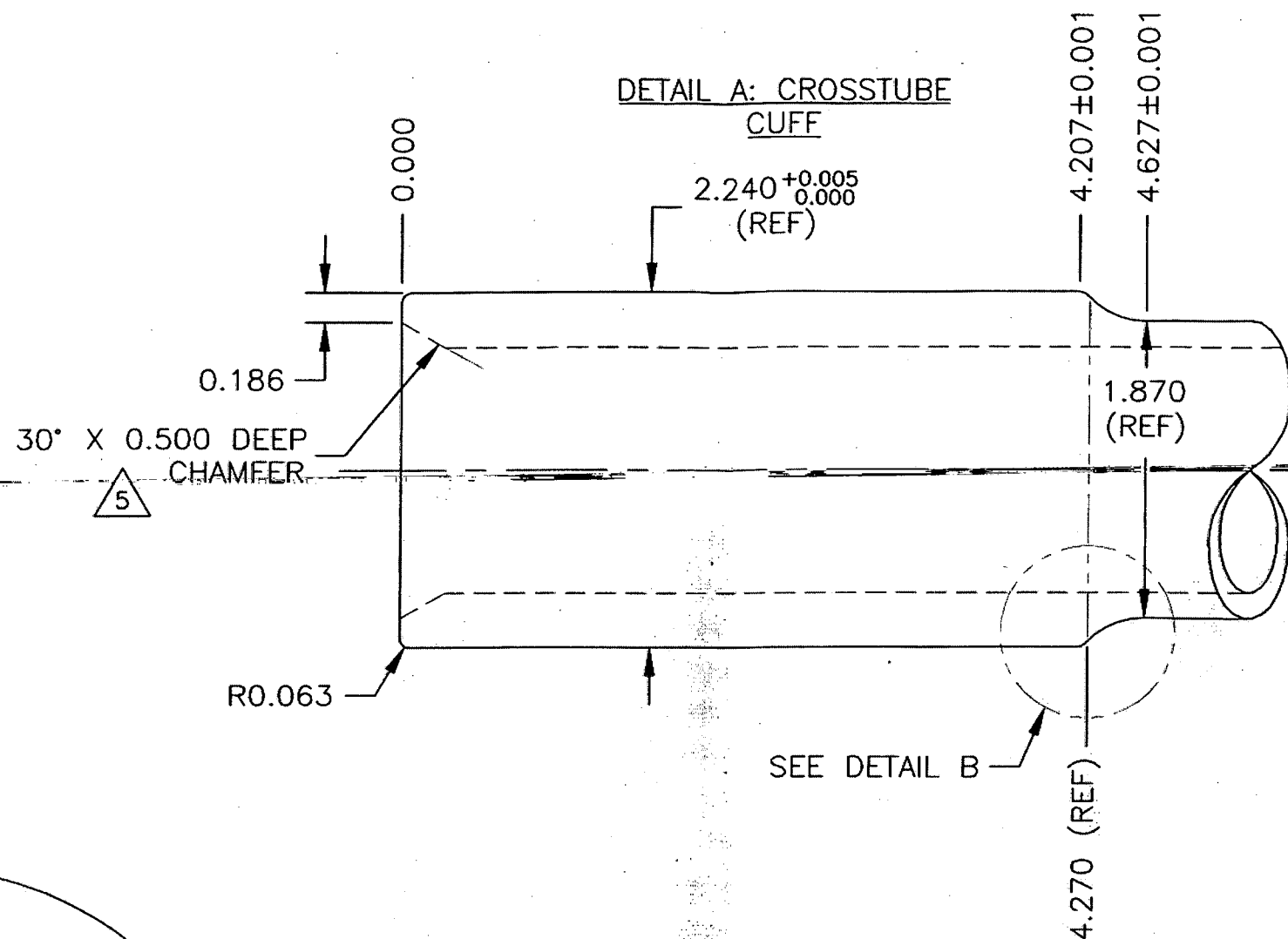
REV. A
SHEET 2 OF 3

DATE

TITLE

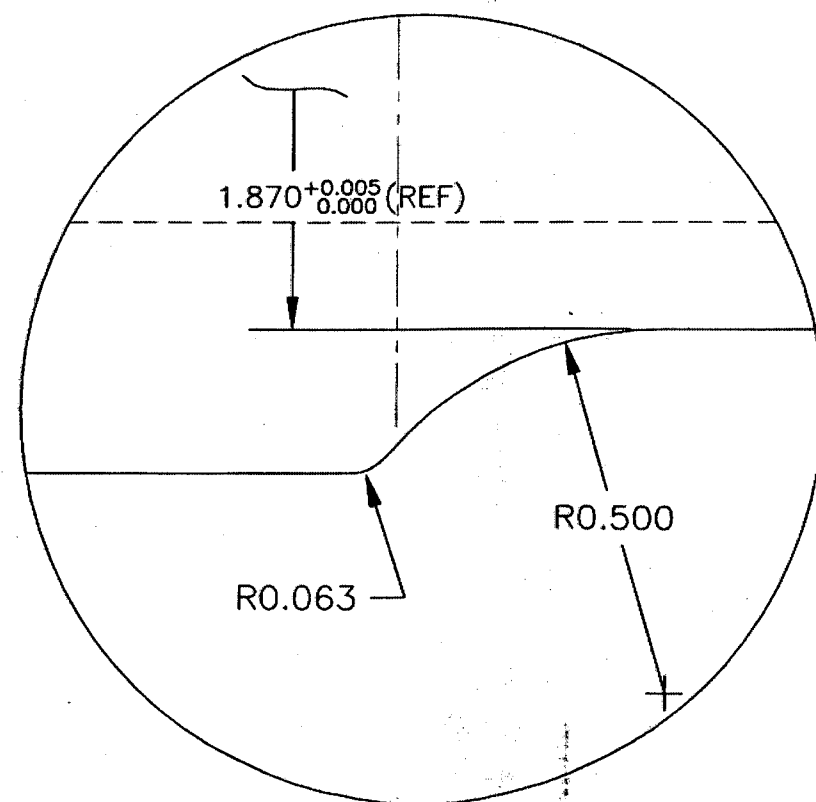
CROSSTUBE ASS'Y (OH-58 HIGH AFT) 1:10

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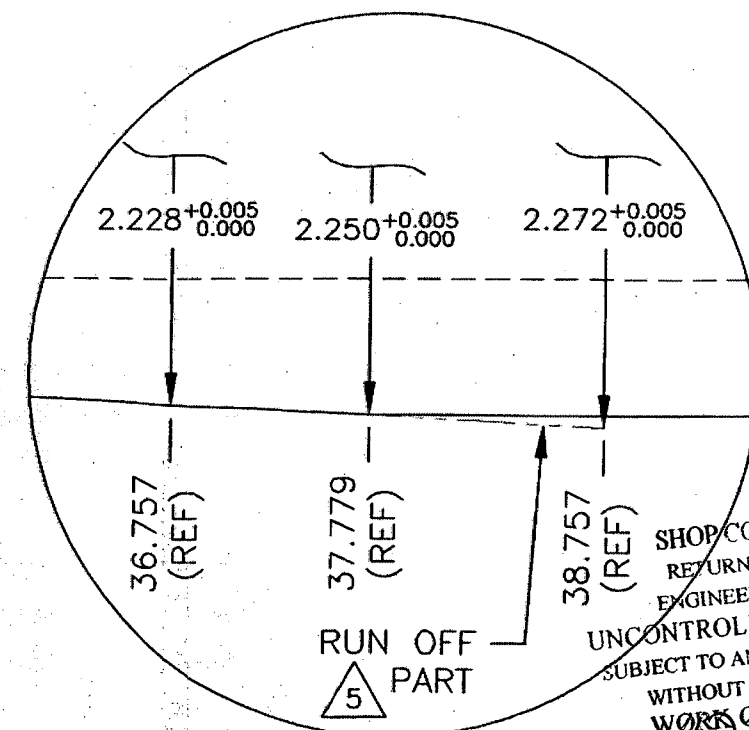


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026.10.18 PH
Update View 0-0
PL 03.10.02



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REV. A
SHEET 3 OF 3

DATE

00.11.17

TITLE

CROSSTUBE ASS'Y (OH-58 HIGH AFT) 1:1

